Prefabricated floor level shower floor

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Abstract of **NZ517537**

A prefabricated shower floor 1 comprises firstly a shower floor surface 2. The shower floor is formed such that it can be fitted within the floor of a dwelling, wherein the floor of the dwelling surrounds the shower floor and does not extend under the shower floor. This way, the edge parts of the shower floor surface are flush with the surface of the floor of the dwelling. In use, the shower floor provides a standing surface of similar structural integrity to the floor of the dwelling.

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THE PATENTS ACT 1953

COMPLETE SPECIFICATION

No. 517537

A SHOWER FLOOR

I, **GARETH WARREN McVICAR**, A New Zealand citizen, of 3 Benmohr Place, Tokoroa, New Zealand, hereby declare this invention for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:

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FIELD OF INVENTION

This invention relates to a shower floor product.

BACKGROUND ART

It is known to install a prefabricated shower box into a bathroom space or the like. In such installations the shower box rests on the bathroom floor and is thus slightly elevated. It will be appreciated that the prefabricated shower box relies on the underlying bathroom floor for structural integrity, and thus does not provide a sound standing surface in its own right. It is also known to construct showers where the shower floor is part of the overall bathroom floor, however many known methods of achieving this result in a less than even transition from the shower floor to the surrounding bathroom floor.

It is an object of the present invention to provide a shower floor which addresses at least some of the above disadvantages or inconveniences, or to at least provide consumers with a useful choice.

The term "comprise", "comprises", "comprised" or "comprising", if and when used in this document, should be interpreted non-exclusively, i.e. should be interpreted non-exclusively - to mean "consisting of or including".

GENERAL DESCRIPTION

According to one aspect of the invention there is provided a prefabricated shower floor, having a shower floor surface; the shower floor being formed such that it can be fitted within the floor of a dwelling wherein the floor of the dwelling substantially surrounds the shower floor and substantially does not extend under the shower floor

such that at least edge parts of the shower floor surface are substantially flush with the surface of the floor of the dwelling, and wherein the shower floor is formed to provide, when in normal use, a standing surface of substantially similar structural integrity to the floor of the dwelling.

For the avoidance of doubt, the should floor should be taken to be substantially surrounded by the floor of the dwelling even in cases where at least part of the shower floor is adjacent an external wall of the dwelling.

Preferably the shower floor comprises a support means which incorporates framing.

Preferably the shower floor comprises drainage means.

Preferably the drainage means comprises an aperture and/or drainage valleys.

Preferably the shower floor surface is angled such that when the shower floor is in use water running above the shower floor surface drains under gravity to and through the aperture.

Optionally the support means comprises a substantially planar base and a number of beams, and wherein the shower floor surface and the planar base substantially sandwich the beams.

Optionally the support means includes brackets suitable for use in securing the shower floor to joists of the dwelling.

Optionally the shower floor incorporates an up-stand extending substantially perpendicularly adjacent at least parts of the shower floor surface.

Optionally the shower floor surface is formed from a sheet material.

According to a further aspect of the invention there is provided a method of constructing a shower floor, comprising obtaining a shower floor as set out above and fitting it to the floor of a dwelling such that the shower floor and the floor of the dwelling form a substantially continuous floor surface, wherein the shower floor is substantially within, but substantially not underlain by, the floor of the dwelling.

DESCRIPTION OF THE DRAWINGS

Some preferred aspects of the invention will now be described by way of example, and with reference to the accompanying drawings, of which:

Figure 1 is a cross-sectional view of a shower floor according to the invention,

Figure 2 is a cross-sectional view of the shower floor of figure 1 when installed,

Figure 3 is a cross-sectional view of a shower floor installed in accordance with a further embodiment of the invention,

Figure 4 is a cross sectional view showing detail of a shower floor according to a particular embodiment of the invention when installed,

Figure 5 is a cross-sectional view of a shower floor installed in accordance with

a particular embodiment of the invention,

Figure 6 shows photographic style images of a shower floor according to the invention,

Figure 7 is a plan view of a shower floor according to an embodiment of the invention, and

Figure 8 is a plan view of a shower floor according to an embodiment of the invention.

DETAILED DESCRIPTION

Referring to figure 1, the shower floor 1 comprises a shower floor surface 2, a planar base 3 and beams 4 sandwiched therebetween. The planar base 3 and the beams 4 provide structural integrity to the shower floor so that it can be fitted flush with a bathroom floor (not shown) - ie so that the bathroom floor and the shower floor 1 together form a substantially continuous floor surface. As also shown in figure 1, the shower floor surface 2 is inwardly angled to facilitate drainage of water to a central water outlet aperture 6. The shower floor surface 2 and the planar base 3 are optionally formed from tanalised plywood, and the beams 4 are optionally formed from tanalised timber. Preferably the edges 7 of the shower floor adjacent the aperture 6 are "rolled" or "coved". Tanalised wedges 8 are fitted between the shower floor surface 2 and the planar base 3 to enclose a space between these which is filled with a suitable polyurethane foam 9 or similar.

Figure 2 shows the shower floor 1 in use in a bathroom, fitted adjacent a wall 10.

More specifically, the shower floor 1 is fitted to joists 11 of the bathroom of a dwelling by way of metal brackets 12 and nogging 13. In some embodiments of the invention the brackets 12 and/or the nogging 13 may be taken as part of the shower floor 1. The shower floor 1 is fitted so that the shower floor surface 2 and the rest of the bathroom floor form a continuous floor surface - ie with substantially flush fitting between these. As shown in figure 2, a floor covering such as linoleum 14 may be applied over the shower floor surface 1, and may continue partially up the wall 10, to provide an aesthetically pleasing waterproof skin. The linoleum 14 only extends a short distance up the wall 10, and is sealed against a wall lining 15 by way of a suitable sealant 16. The wall lining 15 may be fitted against aqualine™ jib or similar.

Referring to figure 3, a further arrangement of the invention is shown which is in many respects similar to that of figure 2. The main difference to the figure 2 arrangement is that the shower floor 1 incorporates an up-stand 17 which extends upwards from a side part of the shower floor 2 for butting up against the wall 10.

Figure 4 shows detail of the manner in which a shower floor according to the invention can be installed against the remainder of the bathroom floor 18 of a dwelling in one particular embodiment. As shown, the shower floor 1 is arranged substantially flush with the bathroom floor 18, the shower floor surface being slightly inwardly angled to facilitate drainage. An aluminium T section fitting 19 is arranged and fixed between the bathroom floor 18 and the shower floor 1 to facilitate a seal therebetween.

Figure 5 shows a further arrangement of the invention similar to the figure 2 arrangement. In this arrangement there is a smaller up-stand 20. The shower floor

surface 2 is fitted with a skin of tiles 21, as opposed to linoleum or the like, and the tiles proceed up the wall as shown at 22. A suitable sealant 23 is applied to the tiles adjacent where the shower floor surface 2 merges with the wall so as to provide a suitably watertight area. In the figure 5 arrangement a fibre glass membrane may be employed on the wall and the shower floor to enhance water resistance.

Preferably the invention is such that the shower floor 1 incorporates a water trap for fitting into the aperture 6, although this is not essential. In some embodiments of the invention the water trap may be omitted or replaced by some alternative component.

Referring to figure 6, there is shown four images of one embodiment of the invention in various angles, and in some cases in various stages of completion. The shower floor 24 at figure 5 is substantially similar to the embodiment described with reference to figure 1, except that it has a diagonal or "cut-away" edge 25 as may be desirable with some shower shapes in modern dwellings. Figure 7 is a schematic plan view of the figure 6 arrangement showing the positioning of inwardly angled drainage valleys 26. Figure 8 is a schematic plan view of a shower floor which is substantially square in plan view, also showing the positioning of drainage valleys 27.

It will be appreciated that the invention can be employed to facilitate shower construction without the need for significant on-site construction work of the shower floor. The invention may also facilitate the easy production of showers where the shower floor needs to be substantially continuous with the rest of the dwelling concerned to give easy access to disabled persons - eg those using a wheelchair.

While some preferred forms of the invention have been described by way of example, it should be appreciated that improvements and modifications can occur without departing from the scope of the following claims.

WHAT I CLAIM IS:

1. A prefabricated shower floor, having a shower floor surface; the shower floor being formed such that it can be fitted within the floor of a dwelling wherein the floor of the dwelling substantially surrounds the shower floor and substantially does not extend under the shower floor such that at least edge parts of the shower floor surface are substantially flush with the surface of the floor of the dwelling, and wherein the shower floor is formed to provide, when in use, a standing surface of substantially similar structural integrity to the floor of the dwelling.

2. A shower floor according to claim 1, wherein the shower floor comprises a support means which incorporates framing.

3. A shower floor according to claim 1 or 2, wherein the shower floor comprises drainage means.

4. A shower floor according to claim 3, wherein the drainage means comprises an aperture and/or drainage valleys.

5. A shower floor according to any one of the preceding claims, wherein the shower floor surface is angled such that when the shower floor is in use water running above the shower floor surface drains under gravity to and through the aperture.

6. A shower floor according to any one of the preceding claims, comprising a substantially planar base and a number of beams, the shower floor surface and the planar base substantially sandwiching the beams.

7. A shower floor according to any one of the preceding claims, comprising brackets suitable for use in securing the shower floor to joists of the dwelling.

8. A shower floor according to any one of the preceding claims, comprising an up-stand extending substantially perpendicularly adjacent at least parts of the shower floor surface.

9. A shower floor according to any one of the preceding claims, wherein the shower floor surface is formed from sheet material.

10. A method of constructing a shower floor, comprising obtaining a shower floor in accordance with any one of the preceding claims and fitting it to the floor of a dwelling, such that the shower floor and the floor of the dwelling form a substantially continuous floor surface, wherein the shower floor is substantially within, but substantially not underlain by, the floor of the dwelling.

11. A shower floor according to any one of claims 1-9, substantially as herein described with reference to the accompanying drawings as appropriate.

GARETH WARREN McVICAR
By His Authorised Attorney
A.J. Pietras & Associates

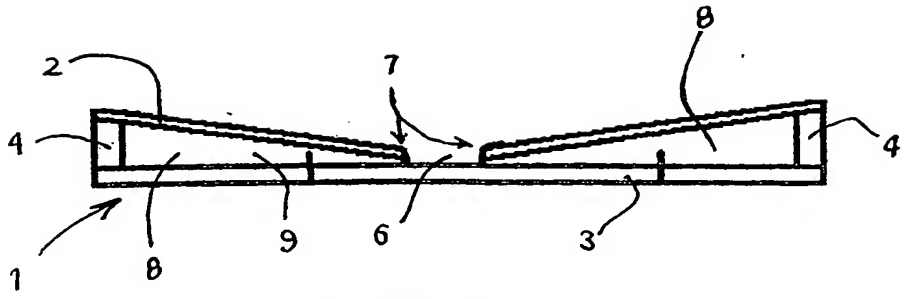


FIGURE 1

FIGURE 2

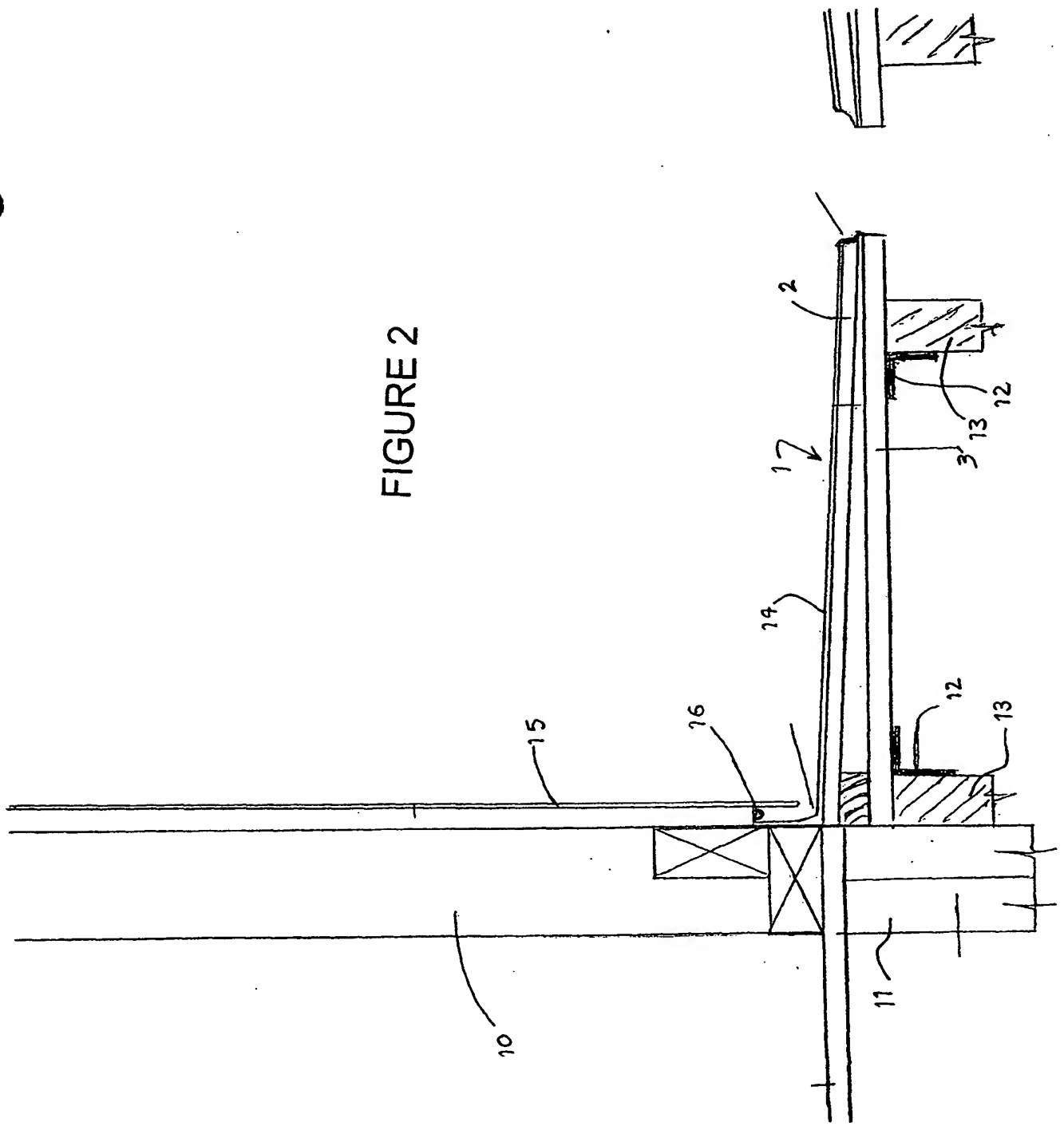
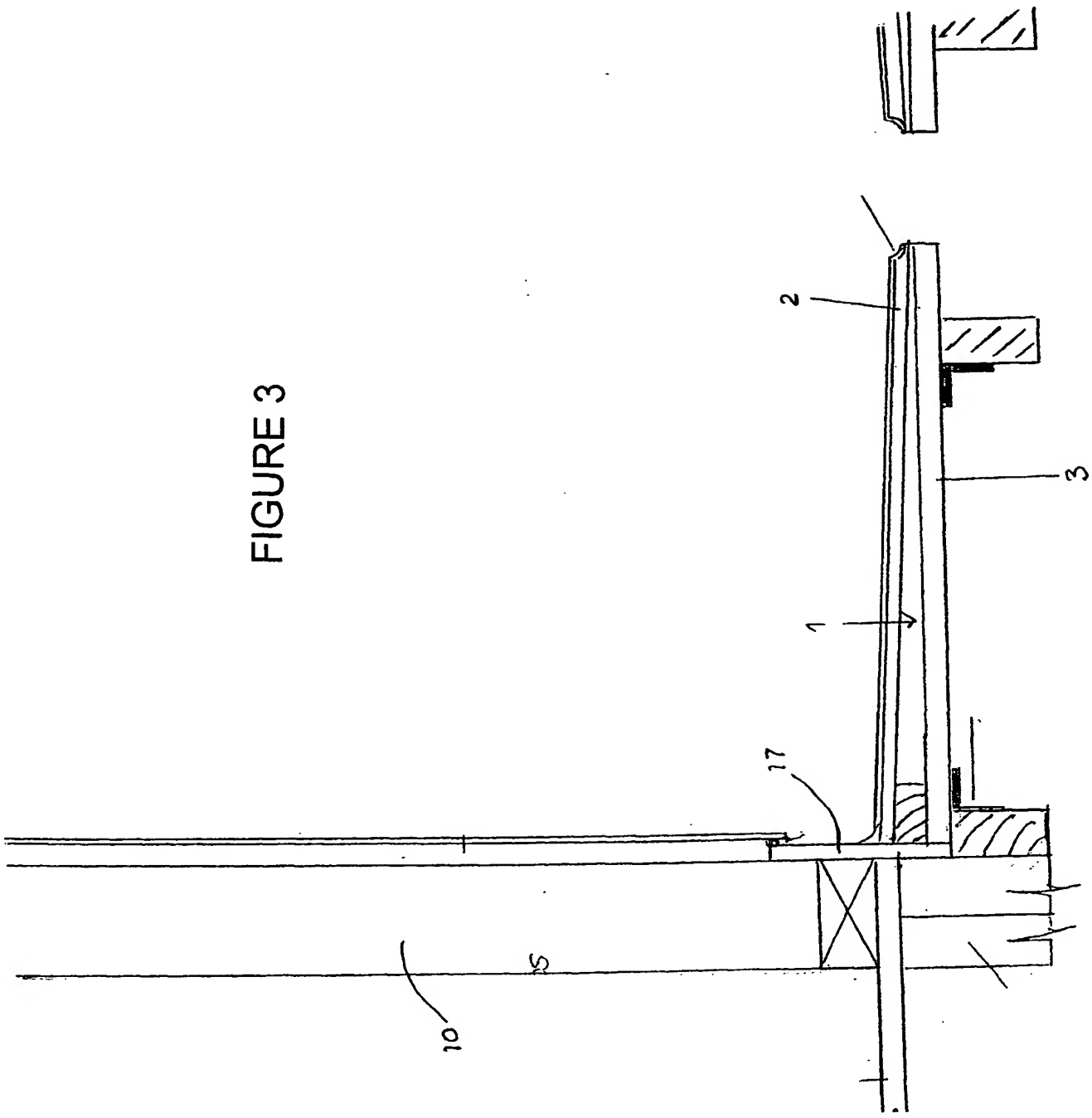


FIGURE 3



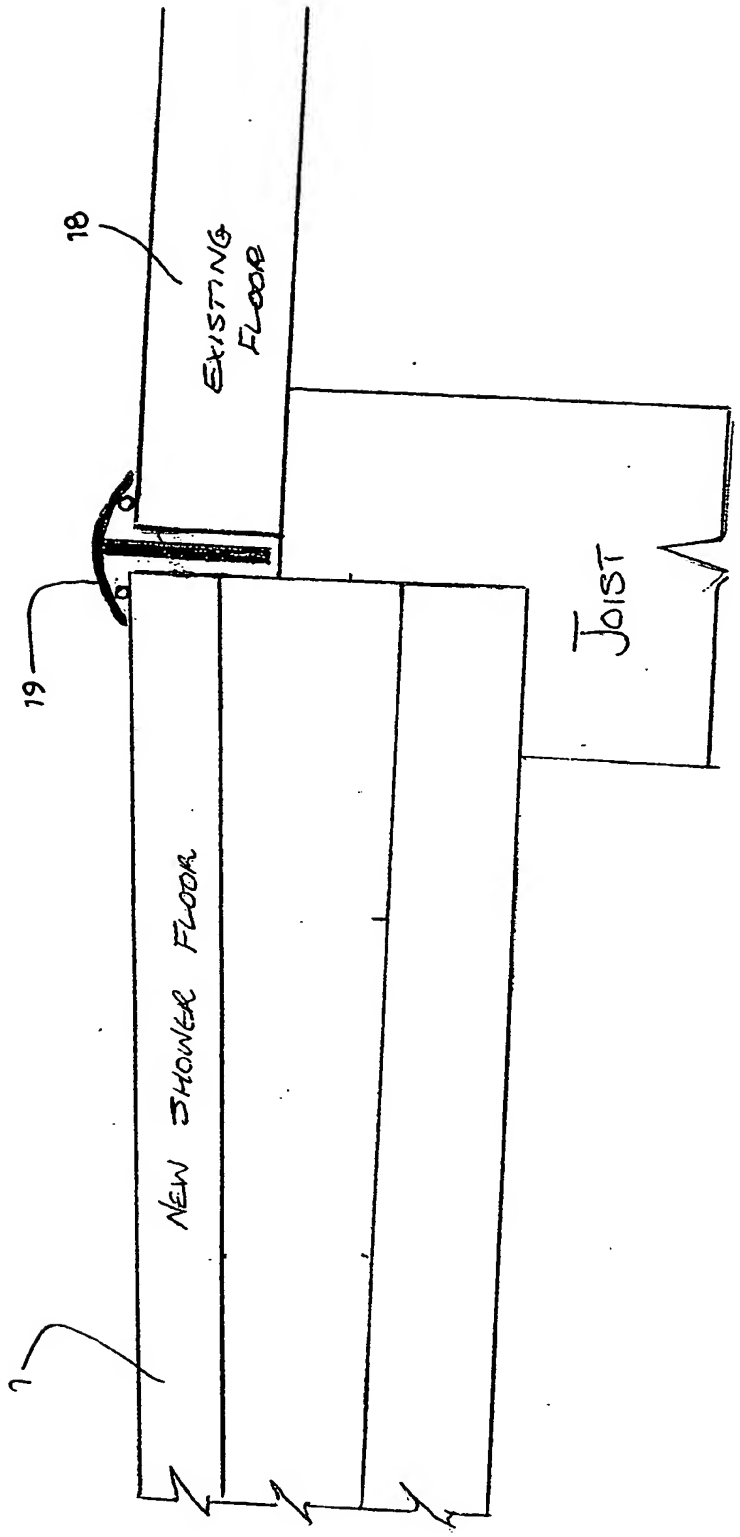
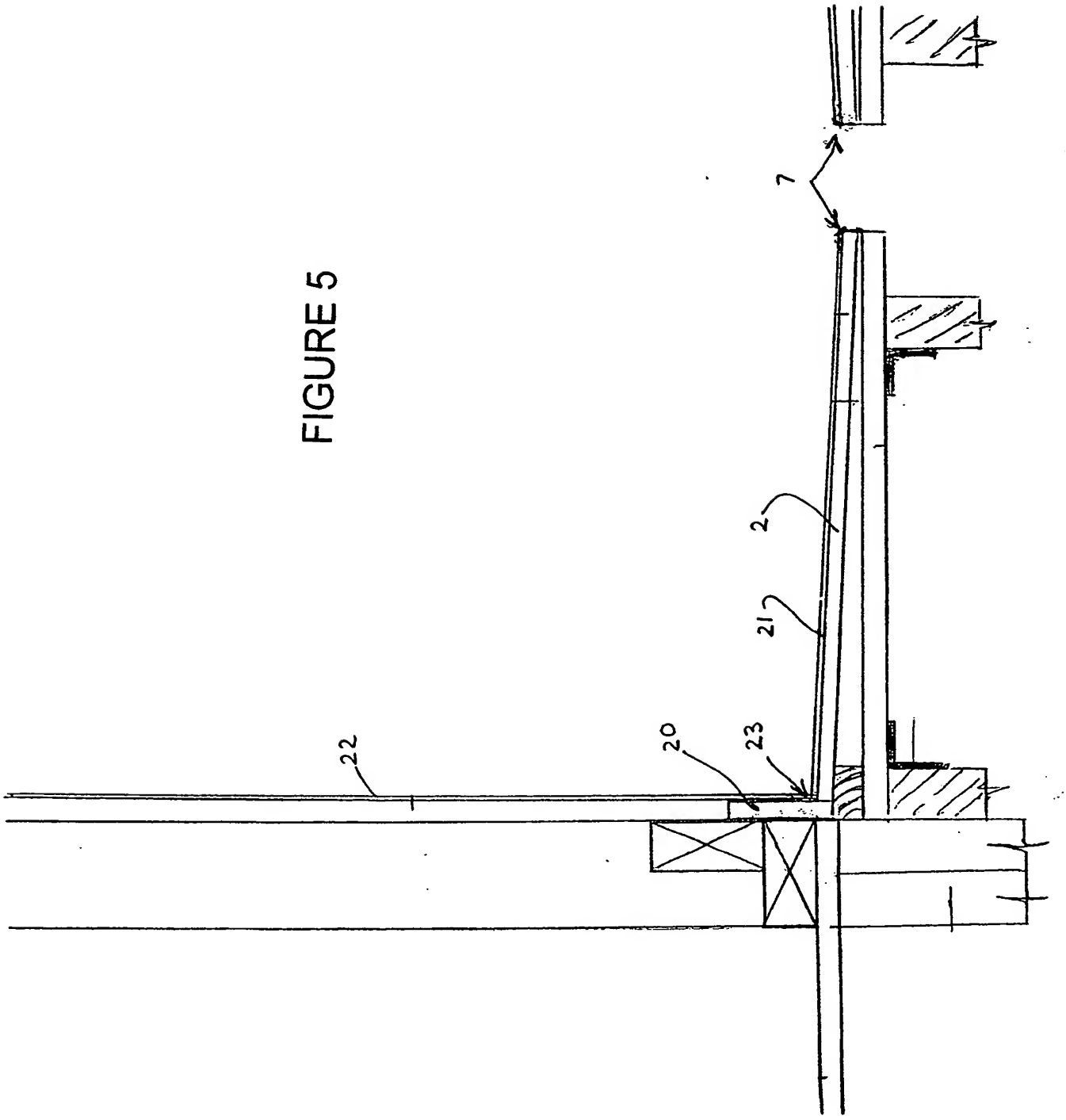


FIGURE 4

FIGURE 5



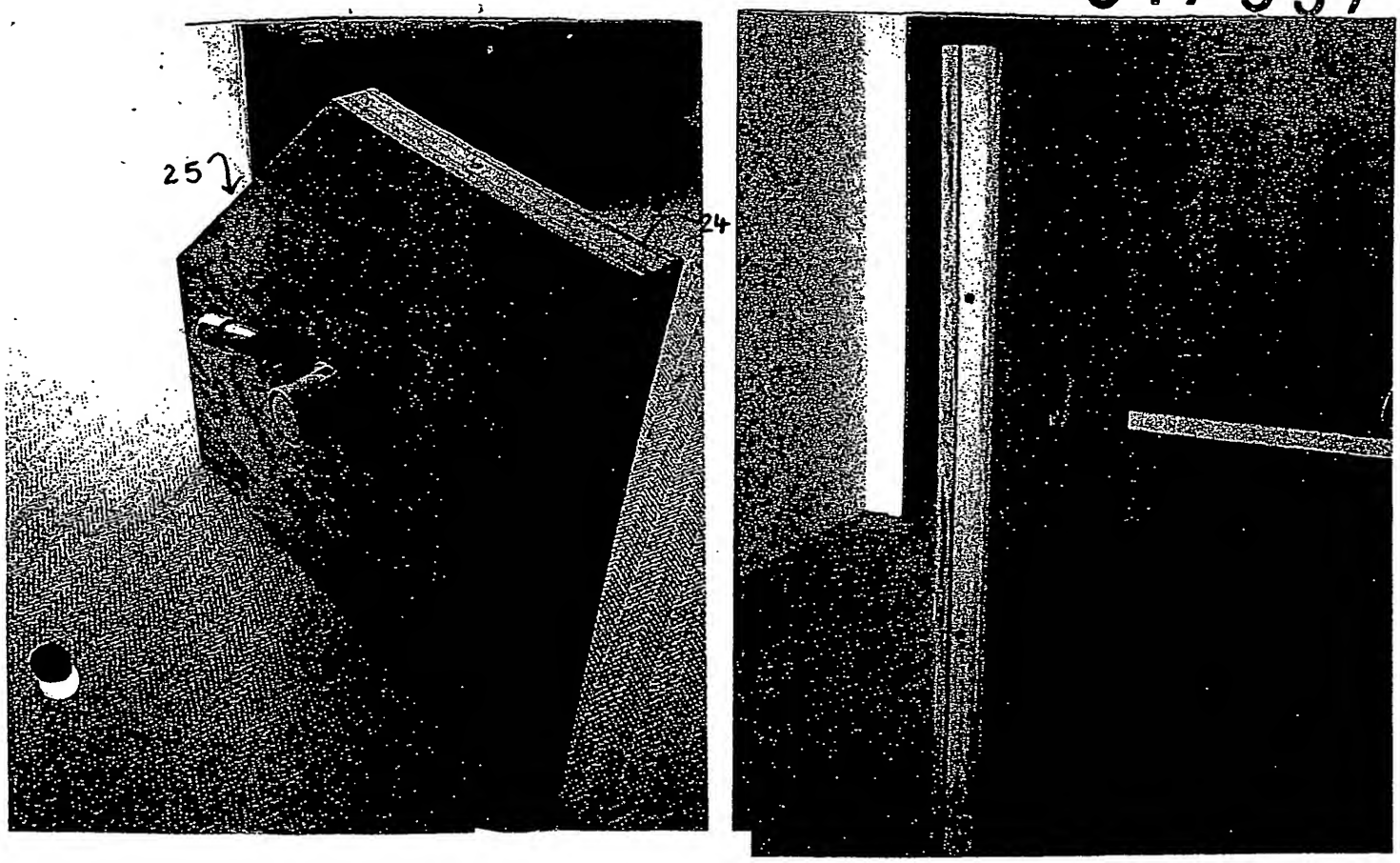


FIGURE 6

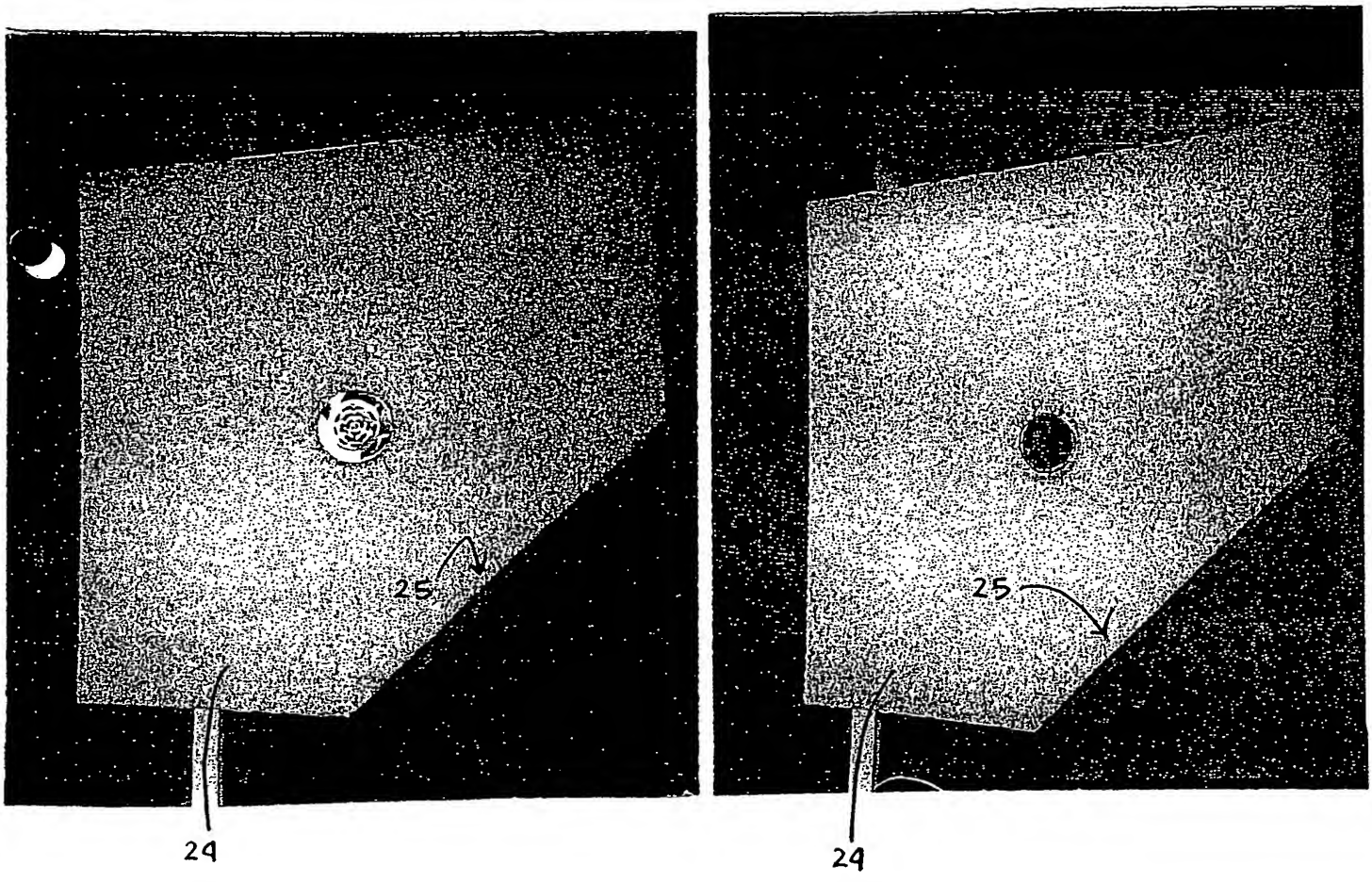
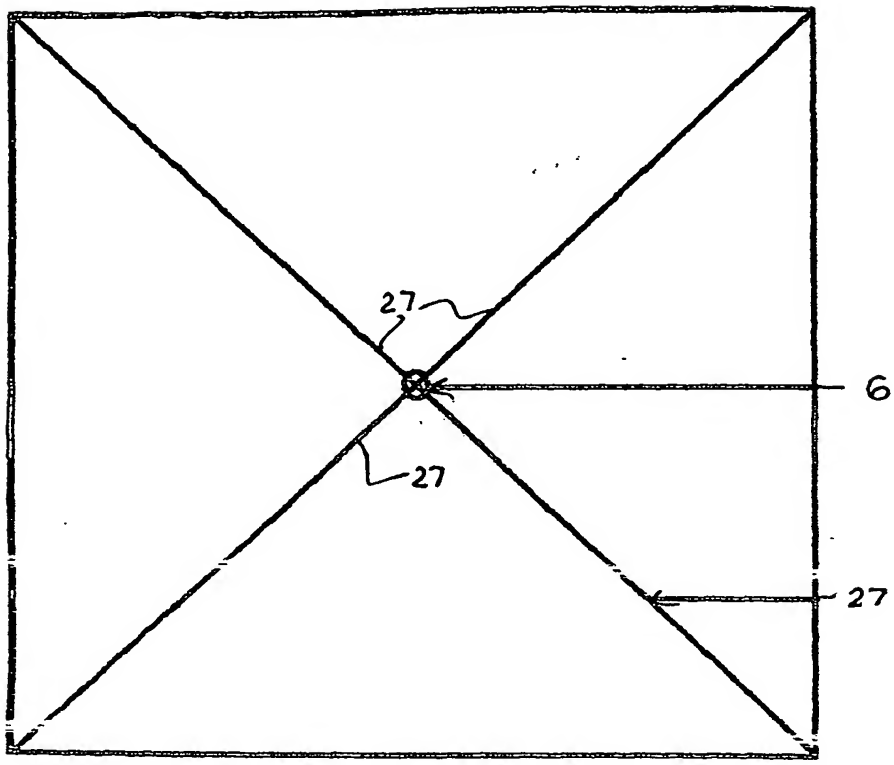


FIGURE 8



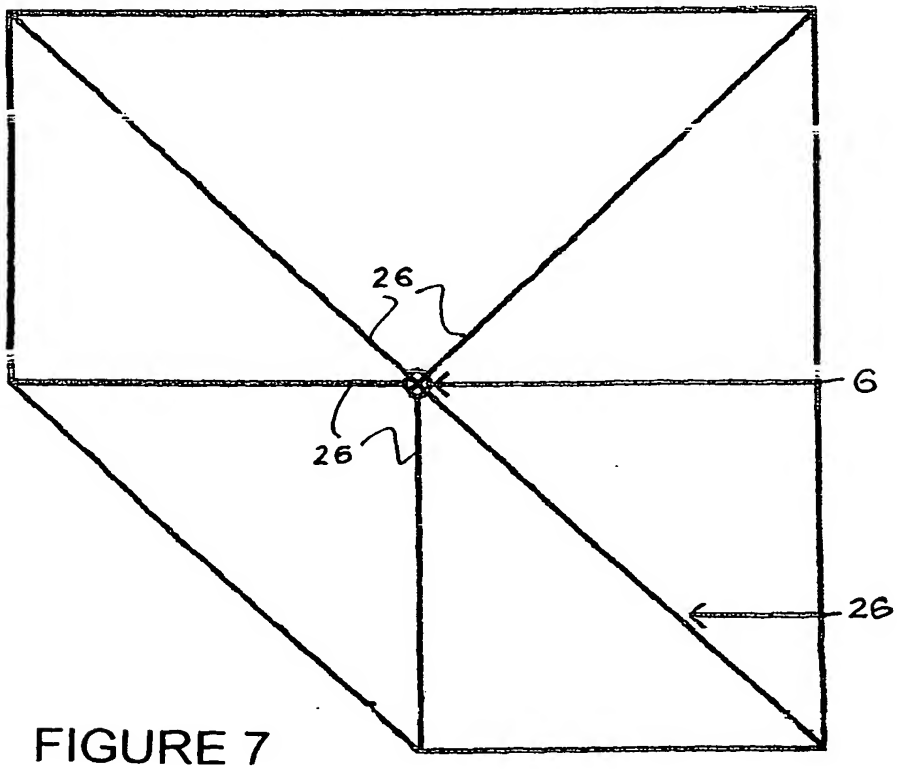


FIGURE 7

END